REMARKS

In view of the remarks presented below, Applicant requests reconsideration of the rejection of Claims 1-4, 6, and 7 under 35 U.S.C. 103(a) and the objection to Claims 5, 8, and 9. Claims 10-17 have been withdrawn, and Applicant reserves the right to file a divisional application for these claims. Claim 1 has been amended to change the word "product" in step (c) to the word "material" for proper agreement with the antecedent "material" in step (b).

Claims 1-4, 6, and 7 have been rejected under 35 U.S.C. 103(a) as unpatentable over the English language translation of Czech Patent 192 658 B-1 submitted by Applicant ("Czech '658") in view of PCT Publication WO 02/45846 A1 ("WO '846").

Czech '658 discloses a method for the production of high-purity arsenic metal comprising the steps of decomposing a metal arsenide with water or an aqueous acid to yield crude arsine, removing hydrogen sulfide and hydrogen selenide from the crude arsine by the action of a strong base, removing moisture by reaction with phosphorous oxide, filtering the treated stream, decomposing the arsine in the filtered treated stream by heating to 500-1200°C, and condensing high-purity arsenic metal from the gas phase at 100-500°C.

WO '846 discloses methods for the removal of trace impurities such as silane, germane, hydrogen sulfide, and water from hydride gases such as ammonia, phosphine, and arsine by adsorption on thermally activated aluminas from organic sources, thermally activated modified organic alumina materials, and thermally activated modified aluminas from inorganic sources.

The embodiments of the claimed invention comprise contacting a volatile metal hydride feed containing one or more acidic impurities, one of which is a sulfur-containing impurity, with an alkaline material, reacting at least a portion of the sulfur-containing impurity with the alkaline material to remove the portion of the sulfur-containing impurity from the feed and provide an intermediate purified material, and contacting the intermediate purified product with an adsorbent material to remove at least a portion of the sulfur-containing impurity from the intermediate purified material and provide a purified volatile metal hydride product.

The Examiner alleges that, because further purification would also be desirable in Czech '658, motivation to additionally purify the resulting arsine product of Czech '658 with an activated alumina adsorbent as taught by WO '846 would have been a modification obvious to one of ordinary skill in the art at the time the invention was made. Applicant disagrees and submits that there is no suggestion in Czech '658 that the initially-purified arsine of (i.e., the crude arsine after contact with alkaline material, reaction with phosphorous oxide, and filtration) requires additional purification by adsorption prior to decomposition and condensation to yield a high-purity arsenic metal product. Czech '658 expressly teaches that if further impurity hydrides remain, then it "is necessary to decompose these compounds **thermally**..." The skilled person who understands the Czech '658 disclosure would see no reason for additional adsorptive purification prior to the arsine decomposition step.

The desired product of Czech '658 is arsenic metal while, in contrast, the desired product of WO '846 is a purified hydride gas. Because there is no need in Czech '658 to further assorptively purify the initially-purified material before decomposition, the skilled person would have no motivation to modify the process of Czech '658 by further purifying the initially-purified material using the adsorption process of WO '846, rather than the **thermal** process step expressly taught by Czech '658.

The objectives of Czech '658 and WO '846 are diametrically opposed because WO '846 specifies that the metal hydride is the final product while, in contrast, Czech '658 requires that the metal hydride (arsine) be decomposed to form arsenic metal. Because of these opposed objectives, the skilled person would find no motivation in either Czech '658 or WO '846 to combine the two disclosures.

In order to modify the process of Czech '658 to make the desired purified volatile metal hydride product of WO '846, the final decomposition and condensation steps of Czech '658 would have to be deleted. This would render the process of Czech '658 inoperative for its intended purpose, which is the production of high-purity arsenic metal. There is no disclosure or suggestion in Czech '658 that a volatile metal hydride could be considered a desired final product. In addition, as stated above, there is no disclosure or suggestion in Czech '658 that further adsorptive purification of the initially-purified material is needed prior to final decomposition and condensation, only **thermal decomposition** is expressly taught. Placing the adsorption step of WO '846 into the Czech '658 process prior to decomposition

and condensation, and in replacement of the suggested thermal decomposition, would make the production of arsenic metal by the Czech '658 process unnecessarily complex and more expensive. Czech '658 expressly desires to avoid "complicated technological equipment" (page 3, 1st sentence of 2nd paragraph). At the top of page 4, Czech '658 expressly teaches the objective of a "technologically not demanding" process. Czech '658 teaches to avoid processes or process steps "which significantly reduces the economy of production" (last line of page 3). The skilled person would understand clearly that adding an additional step is taught away from by Czech '658 and would not be a desirable result.

Further, Czech '658 teaches away from the claimed production of a volatile metal hydride by requiring that the arsine be decomposed to yield metallic arsenic. Czech '658 is therefore a defective reference for judging the patentability of Claims 1-4, 6, and 7.

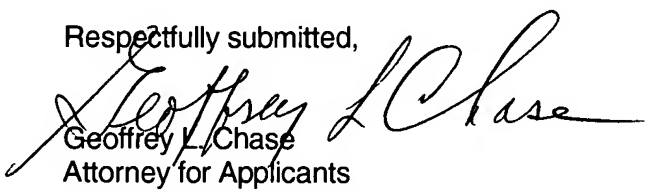
For these reasons, Applicant respectfully submits that the Examiner has improperly combined Czech '658 and WO '846 in rejecting Claims 1-4, 6, and 7. The Examiner has not established that Claims 1-4, 6, and 7 are unpatentable under 35 U.S.C. 103(a) over Czech '658 in view of WO '846, and it is requested that the rejection be withdrawn.

Claims 5, 8, and 9 have been objected to as being dependent upon a rejected base claim. In view of the arguments submitted supporting the withdrawal of the rejection of Claims 1-4, 6, and 7, it is requested that the objection to Claims 5, 8, and 9 be withdrawn. A timely Notice of Allowance for Claims 1-9 is requested.

Amendments to the Specification and Abstract will be made as needed when the final claims are allowed so that the descriptive matter is in harmony with the claims as allowed (MPEP 1302.01).

Prior art made of record and not relied upon is acknowledged.

Respectfully submitted,



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